

Notice of Allowability

Application No.

10/715,448

Examiner

Dao H. Nguyen

Applicant(s)

MATSUOKA ET AL.

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/10/2005.
2. ☒ The allowed claim(s) is/are 1-14 and 16-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____

David Nelms

Supervisory Patent Examiner
Technology Center 2800

DETAILED ACTION

1. This Office Action is in response to the communications dated 08/10/2005 through 09/07/2005.

Claims 1-14, and 16-23 are active in this application.

Claim(s) 15 has been cancelled.

New claim(s) 21-23 have been added.

Acknowledges

2. Receipt is acknowledged of the following items from the Applicant.

Correction(s) to the drawings filed 08/10/2005 have been considered and accepted.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and /or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.3.12. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Art Unit: 2818

4. The following amendment has been made to the claim(s) upon agreement by applicant during a telephone conversation with Attorney Mitchell W. Shapiro on 09/07/2005:

Newly added claims 21-23 draw to inventions about directions of current flowing in a magnetic semiconductor memory device, which are different and distinct from the inventions, about the structure of the memory device, discussed by the original and/or amended claims. Therefore, upon the telephone communication, the following agreement has been achieved:

Cancel claims 21-23.

Remarks

5. Applicant's argument(s), filed 08/10/2005, with respect to the newly amended claim(s) 1-14 and 16-20, have been fully considered and are persuasive. Therefore, the rejection of the last Office Action, in view of the amended claim(s), has been withdrawn; Furthermore, the pending claim(s) 1-14 and 16-20 are found in condition for allowance.

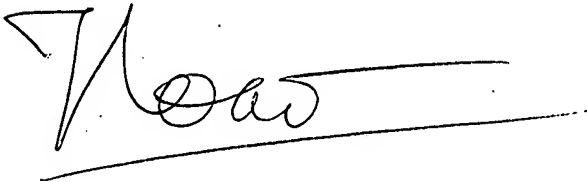
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dao Nguyen whose telephone number is (571)272-1791. The examiner can normally be reached on Monday-Friday 9:00am – 6:00pm. If

Art Unit: 2818

attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571)272-1787. The fax numbers for all communication(s) is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1625.

A handwritten signature in dark ink, appearing to read 'Dao H. Nguyen', with a long horizontal line extending to the right.

Dao H. Nguyen
Art Unit 2818
September 8, 2005

A handwritten signature in dark ink, appearing to read 'David Nelms', with a stylized, circular flourish.

David Nelms
Supervisory Patent Examiner
Technology Center 2800

REPLACEMENT SHEET



Accepted
dhn
09/08/05

FIG. 1

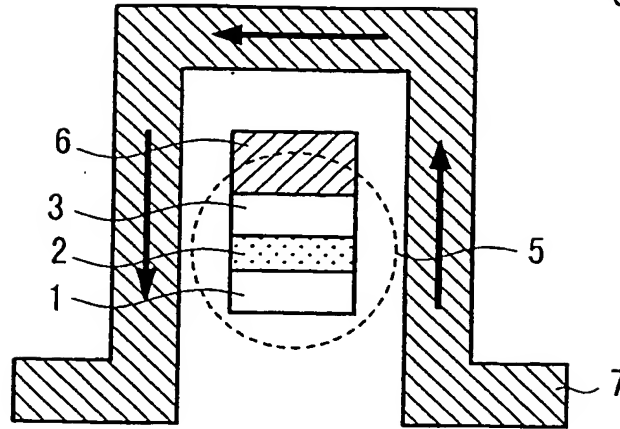


FIG. 2

PRIOR ART

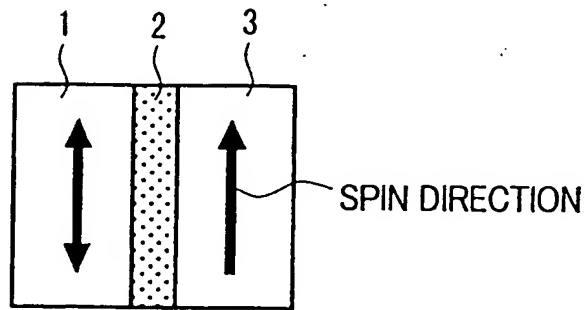
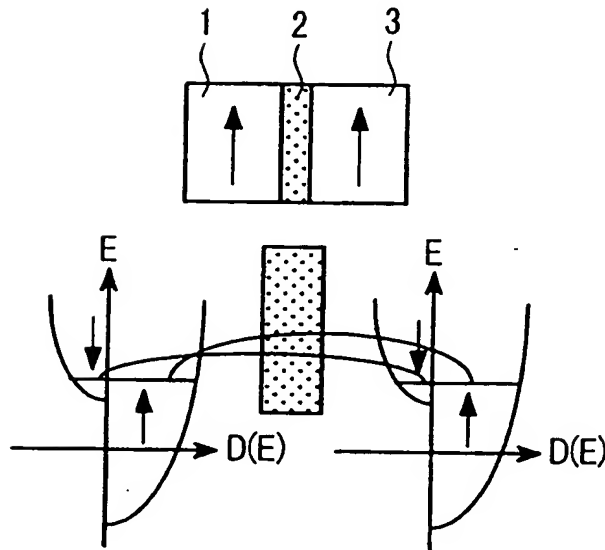


FIG. 3A

PRIOR ART



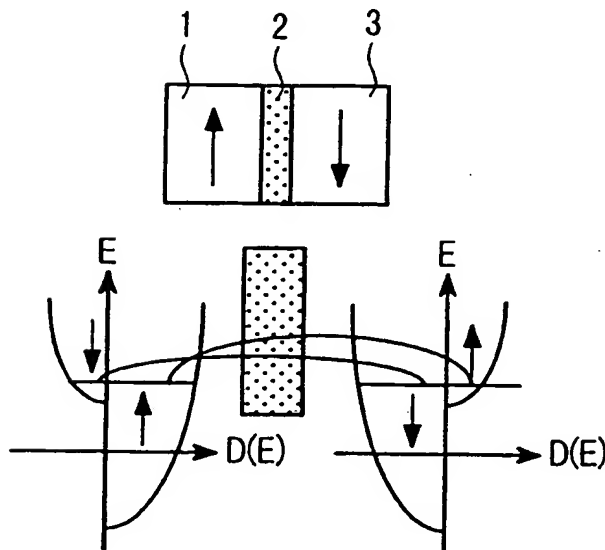
$1/R \sim D_1(E) \cdot D_2(E)$
 1: BEFORE TUNNELING
 2: AFTER TUNNELING

RESISTANCE: SMALL

WHEN THE SPINS ARE PARALLEL

FIG. 3B

PRIOR ART



RESISTANCE: LARGE

WHEN THE SPINS ARE ANTI-PARALLEL

REPLACEMENT SHEET

FIG. 4

PRIOR ART

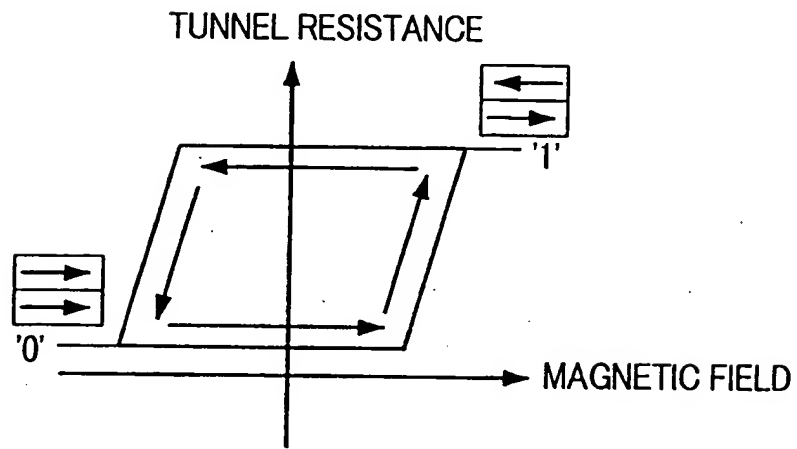
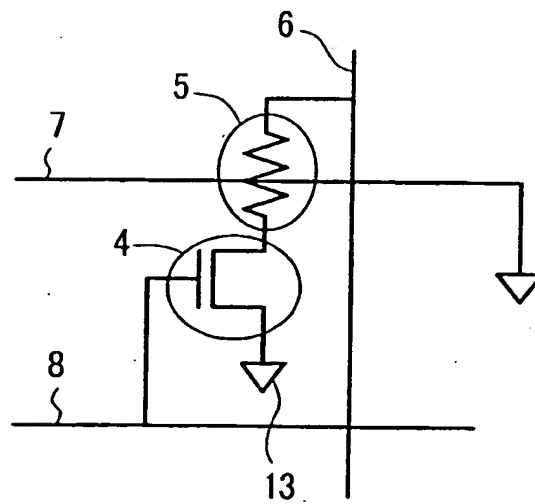


FIG. 5

PRIOR ART



REPLACEMENT SHEET

FIG. 6

PRIOR ART

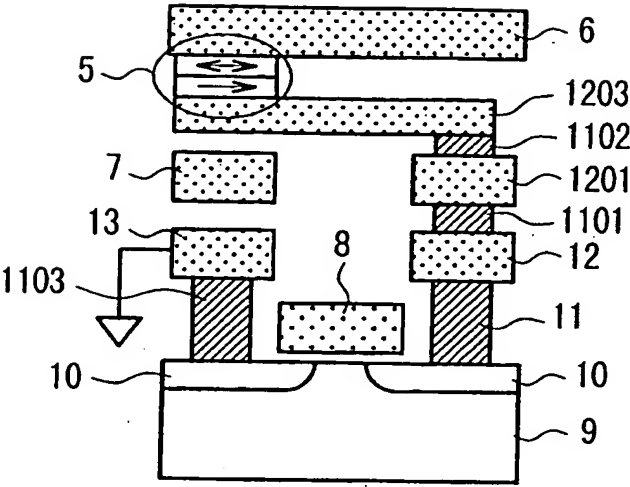


FIG. 7

PRIOR ART

